

## **REMARKS**

Following entry of the present response, claims 1-4, 6-16, 18-28, and 30-36 will be pending in the present application. Claims 1, 13 and 25 have been amended. No new matter has been added. Support for the amendments can be found throughout the present Specification, including paragraphs 0021-0031 and Table 1.

### **Summary of Telephonic Interview**

Applicant thanks Examiner Ahluwalia for taking the time to conduct a telephonic interview on May 6, 2008. During the interview, the undersigned briefly discussed the Section 103 rejection based on U.S. Patent Application Publication No. 2003/0204513 (“Bumbulis”). Specifically, the undersigned and Examiner Ahluwalia discussed the “type of column value” and “applying a type specific mapping function to the column value” features recited in the claims of the Applicant.

### **Rejections under 35 U.S.C. § 103**

Claims 1-4, 6-8, 13-16, 18-20, 25-28 and 30-32 stand rejected under 35 U.S.C. § 103(a) allegedly as being obvious over US 2003/0204513 (Bumbulis) in view of US 5,727,081 (Burges). The office action states that Bumbulis discloses all of independent claims 1, 13, and 25 including determining the type of the column value and applying a type specific mapping function to the column value, citing Bumbulis at paragraphs 21, 67-69 and 239. (Office Action at pp. 2-4). Without conceding the merits of the rejection, Applicant has amended the claims to further clarify the claimed embodiments.

As amended, claims 1, 13 and 25 recite, in part, that each column type has an associated transformative function. Further, the transformative function is applied to an associated column resulting in the normalized column value.

As noted in the Background and Summary sections of the present Specification, minimizing database size is critical, especially in mobile devices. One way of minimizing database size is through normalization. However, traditionally, normalization over different column types was not available, and thus increased database size.

The claimed embodiments permit normalization over different column types via standard index key normalization. As a result, columns of different types need no special handling, and thus reduce database size.

For example, Table 1 of the present Specification describes an exemplary embodiment where standard normalized functions generate standard index key normalizations for different column types.

Bumbulis, by contrast, does not contemplate different column types. In fact, no mention of different column types is made in the entire Bumbulis application. Thus, Bumbulis suffers from the deficiencies identified by Applicant in the present Specification; namely, Bumbulis does not provide for standard index key normalizations for different column types.

Accordingly, Applicant respectfully submits that claims 1, 13 and 25 patentably define over Bumbulis. As claims 3, 4 and 6-12 depend from claim 1, claims 14-16 and 18-24 depend from claim 12, and claims 24-28 and 30-36 depend from claim 23, Applicant further submits that the dependent claims likewise patentably define over the cited reference. For at least the foregoing reasons, Applicant respectfully requests withdrawal of the rejection of claims 1-4, 6-16, 18-28, and 30-36 under 35 U.S.C. § 103.

Claims 9-12, 21-24 and 33-36 stand rejected under 35 U.S.C. § 103(a) allegedly as being obvious over US 2003/0204513 (Bumbulis) in view of US 5,727,081 (Burges). The office action states that Burges discloses the unnormalization feature of independent claim 9, citing Burges at columns 11 and 12. (Office Action at pp. 6-7, 11-13 and 16-18).

Burges does not teach the unnormalization described in claim 9. Claim 9 of the present application involves unnormalizing an index key that previously was normalized. In Burges, the word “unnormalized” refers to data that has not been normalized, i.e. the computed scores for symbols and numeric characters **remain** unnormalized. (Burges at column 11, lines 9-29 and column 12, lines 12-35). Thus, the cited sections of Burges never teach unnormalizing previously normalized data because the data referred to was never normalized in the first place. Thus, Burges never teaches unnormalizing index key column information relating to b-tree compression.

Therefore, Burges does not teach a system for index key column unnormalization of a normalized index key. Accordingly, the Applicant respectfully requests the withdrawal of the rejection of claim 9.

Independent claims 20 and 33, as amended, contain similar features as independent claim 9, and are therefore allowable for the same reasons given for claim 9 above. The

**DOCKET NO.:** MSFT-2831 304071.01  
**Application No.:** 10/748,570  
**Office Action Dated:** December 20, 2007

**PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116**

Applicant respectfully requests that the Examiner withdraw the rejections and allow claims 20 and 33.

Dependent claims 10-12, 21-24, and 34-36 are all variously dependent on independent claims 9, 20, and 33, and are therefore allowable for at least the reasons given above for the independent claims. The Applicant respectfully requests that the Examiner withdraw the rejections and allow claims 10-12, 21-24, and 34-36.

**DOCKET NO.:** MSFT-2831 304071.01  
**Application No.:** 10/748,570  
**Office Action Dated:** December 20, 2007

**PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116**

**CONCLUSION**

In view of the foregoing, Applicant respectfully submits that the claims are allowable and that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the present application for any reason, the Examiner is encouraged to contact the undersigned attorney, Stuart A. Schanbacher at (215) 564-0947, to discuss resolution of any remaining issues.

Date: June 19, 2008

/Stuart A. Schanbacher/  
Stuart A. Schanbacher  
Registration No. 61,895

Woodcock Washburn LLP  
Cira Centre  
2929 Arch Street, 12th Floor  
Philadelphia, PA 19104-2891  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439